

of numerical values representing features appearing on the outline of an object and applying a scaling or non-linear transformation to said values to arrive at a representation of the outline.

24. (New) A method as claimed is claim 23 wherein said numerical values are substantially invariant to the scale of the outline.

25. (New) A method as claimed is claim 23 wherein the number of said numerical values depends on the shape of the outline.

26. (New) A method as claimed in claim 23 wherein the scaling or non-linear transformation does not depend on the outline shape.

27. (New) A method as claimed in claim 23 wherein the numerical values reflect points of inflection on the outline.

28. (New) A method as claimed in claim 23 comprising deriving a curvature scale space representation of the outline by smoothing the outline in a plurality of stages using a smoothing parameter resulting in a plurality of outline curves, using values for feature points on each outline curve to derive curves characteristic of the original outline, and selecting the co-ordinates of peaks of said characteristic curves, wherein said transformation is applied to peak co-ordinate values.

29. (New) A method as claimed in claim 28 wherein the feature points relate to the curvature of each outline curve.

30. (New) A method as claimed in claim 29 wherein the feature points relate to the maxima and minima of the curvature of the outline curves.

31. (New) A method of representing an object appearing in a still or video image, by processing signals corresponding to the image, the method comprising deriving a curvature scale space representation of the object outline, selecting co-ordinates for peaks in the

curvature scale space, and applying a non-trivial transformation to peak co-ordinate values to arrive at a representation of the object outline.

32. (New) A method as claimed in claim 31 wherein the curvature scale space representation is such that peak co-ordinate values are substantially invariant to the scale of the object outline.

33. (New) A method as claimed in claim 31 wherein the transformation is applied to the co-ordinate values corresponding to a smoothing parameter in the CSS representation.

34. (New) A method as claimed in claim 31 wherein the transformation is applied to the co-ordinate values corresponding to an arc-length parameter along the outline.

35. (New) A method as claimed in claim 31 wherein the transformation is a scaling transformation.

36. (New) A method as claimed in claim 31 wherein the transformation is a non-linear transformation.

37. (New) A method as claimed in claim 35 wherein the transformation does not depend on the outline shape.

38. (New) A method as claimed in claim 23 wherein said transformation is in the form of  $z' = a \text{ pow}(z, b) + c$ , where  $a$ ,  $b$  and  $c$  are constants and  $\text{pow}(z, b)$  denotes  $z$  to the power  $b$ .

39. (New) A method as claimed in claim 38 wherein  $b$  is greater than zero and less than 1.

40. (New) A method as claimed in claim 39 wherein  $b$  is in the range of  $0.25 \leq b \leq 0.75$ .

41. (New) A method as claimed in claim 40 wherein  $b = 0.5$ .

42. (New) A method as claimed is claim 41 wherein  $b = 0.6$ .

43. (New) A method for searching for an object in a still or video image by processing signals corresponding to images, the method comprising inputting a query in the form of a two-dimensional outline, deriving a descriptor of said outline using a method as claimed in claim 1, obtaining a descriptor of objects in stored images derived using a method as claimed in claim 1 and comparing said query descriptor with each descriptor for a stored object, and selecting and displaying at least one result corresponding to an image containing an object for which the comparison indicates a degree of similarity between the query and said object.

44. (New) An apparatus adapted to implement a method as claimed in claim 23.

45. (New) A computer program for implementing a method as claimed in claim 23.

46. (New) A computer system programmed to operate according to a method as claimed in claim 23.

47. (New) A computer-readable storage medium storing computer-executable process steps for implementing a method as claimed in claim 23.

48. (New) A method of representing objects in still or video images substantially as hereinbefore described with reference to the accompanying drawings.

49. (New) A method of searching for objects in still or video images substantially as hereinbefore described with reference to the accompanying drawings.

50. (New) A computer system substantially as hereinbefore described with reference to the accompanying drawings.--